

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered). Please AMEND claims 1 and 3 and CANCEL claim 7 without prejudice or disclaimer in accordance with the following:

1. (currently amended) An optical path cross-connect device for accommodating an inter-office transmission line for transferring wavelength-multiplexed optical signals and a plurality of intra-office transmission lines for transferring a wavelength-non-multiplexed optical signal, comprising:

a wavelength branching unit provided with each of said inter-office transmission line, for demultiplexing the wavelength-multiplexed optical signals entered from said inter-office transmission line to a first optical path group;

an intra-office signal input unit provided with said intra-office transmission lines, for repeating the wavelength-non-multiplexed optical signal entered from each of said intra-office transmission lines to said first optical path group and distributing the repeated wavelength-non-multiplexed optical signal to "m" pieces of routing units;

the "m" pieces of routing units for inputting thereinto an optical signal outputted from any one of said wavelength branching unit and said intra-office signal input unit via said first optical path group, and for converting said input optical signal into a predetermined wavelength to thereby output a wavelength-converted optical signal to a second optical path group, said "m" (symbol "m" being an integer and also being larger than 1) " pieces of routing units being subdivided in a unit of at least "n (symbol "n" being an integer and also being larger than 1)" wavelengths as wavelengths ranges to be processed by the respective routing unit are different from each other;

a wavelength combining unit for accommodating thereinto said second optical path group and for selectively wavelength-multiplexing said wavelength-converted optical signal; and

an intra-office signal output unit for accommodating thereinto said second optical path group and for selectively repeating said wavelength-converted optical signal.

2. (original) An optical path cross-connect device as claimed in claim 1 wherein:

the optical signal transferred to said intra-office transmission line is wavelength-multiplexed; and both said intra-office signal input unit and said intra-office signal unit repeat the wavelength-multiplexed optical signal.

3. (currently amended) An optical path cross-connect device for accommodating an inter-office transmission line for transferring wavelength-multiplexed optical signals and a plurality of intra-office transmission lines for transferring a wavelength-non-multiplexed optical signal, comprising:

an optical branching unit provided with said inter-office transmission line, for branching the wavelength-multiplexed optical signals entered from said inter-office transmission line into "m (symbol "m" being an integer and also being larger than 1)" pieces of first optical path groups, while maintaining the wavelength-multiplexed state;

an intra-office signal input unit provided with said intra-office transmission lines, for repeating the wavelength-non-multiplexed optical signal entered from each of said intra-office optical transmission lines;

"m" pieces of routing units for routing an optical signal within a pre-allocated wavelength range from optical signals outputted from said optical branching unit and said intra-office signal input unit to an intra-office signal output unit, and for converting said optical signal within said pre-allocated wavelength range into a desirable wavelength to route a wavelength-converted optical signal to a second optical path group, said "m (symbol "m" being an integer and also being larger than 1)" pieces of routing units being subdivided in a unit of at least "n (symbol "n" being an integer and also being larger than 1)" wavelengths as wavelength ranges to be processed by the respective routing unit are different from each other;

an optical combining unit for accommodating thereinto said second optical path group and for selectively wavelength-multiplexing said wavelength-converted optical signal; and

an intra-office signal output unit for accommodating thereinto said second optical path group and for selectively repeating said wavelength-converted optical signal,

wherein:

said intra-office signal input unit is constituted by an optical space switch; said routing unit is arranged by a wavelength-division demultiplexer, an optical space switch, a wavelength converter and a wavelength-division multiplexer; and said intra-office signal output unit is arranged by an optical space switch.

4. (previously presented) An optical path cross-connect device as claimed in claim

3 wherein:

the optical signal transferred to said intra-office transmission line is wavelength-multiplexed; and both said

intra-office signal input unit and said intra-office signal output unit repeat the wavelength-multiplexed optical signal.

5. (original) An optical path cross-connect device as claimed in claim 1 wherein:

said intra-office signal input unit is constituted by an optical space switch; said routing unit is arranged by an optical space switch and a wavelength converter; and said intra-office signal output unit is arranged by an optical space switch.

6. (previously presented) An optical path cross-connect device as claimed in claim 2 wherein:

said intra-office signal input unit is arranged by a wavelength-division demultiplexer and an optical space switch; said routing unit is constituted by an optical space switch and a wavelength converter; and said intra-office signal output unit is arranged by an optical space switch, a wavelength converter and a wavelength-division multiplexer.

7. (cancelled)

8. (previously presented) An optical path cross-connect device as claimed in claim 4 wherein:

said intra-office signal input unit is arranged by a wavelength-division demultiplexer and an optical space switch; said routing unit is constituted by a wavelength-division demultiplexer, an optical space switch, a wavelength converter and a wavelength-division multiplexer; and said intra-office signal output unit is arranged by an optical space switch, a wavelength converter and a wavelength-division multiplexer.

9. (cancelled)

10. (original) An optical network wherein:

a plurality of the optical path cross-connect devices as claimed in claim 1 are employed so as to constitute said optical network.

11. (previously presented) An optical network wherein:
a plurality of the optical path cross-connect devices as claimed in claim 3 are employed
so as to constitute said optical network.